ANIMAL IDENTIFICATION AND RECORDING FOR ANIMAL DISEASE PREVENTION AND CONTROL

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Any strategy for animal disease prevention and/or control requires the establishment of an animal health information system (AHIS).

- An effective AHIS should be able to collect, manage and systematically analyse relevant epidemiological data, in order to generate appropriate information for policy-makers and other stakeholders along livestock food value chains.
The presence of a fully operative animal identification and registration (I&R) system as well as the existence of an animal traceability (AT) system are pre-requisites for the establishment of an effective and fully integrated AHIS.
I&R and AHIS

Choices made in I&R influence AHIS performances

Animal electronically identified

Samples collection in the framework of disease control programmes

All relevant data (origin, movements, health status, etc.) are recorded and updated

LABORATORIES

Central DB
Choices made in I&R influence AHIS performances
I&R and AHIS

Choices made in I&R influence AHIS performances

- Not only depending on identification means
  - But also for example:
    - Epidemiological unit choice (holding vs herd vs village, pastures codification....)
    - Data collected for each premise / group of animal / individual animal (for examples geographic coordinates)
    - Rules for movements notification (movements to pastures, nomadic herds, ...)
AHIS Objectives

Objectives

1. Support animal disease notification system
2. Management of animal health emergencies
3. Enhance surveillance and early warning
4. Support Risk assessment

Benefits

- International obligations
- International credibility
- Efficacy of interventions
- Reduction of consequences
- Free of disease demonstration
- Health status and certification
- Import / Export risk assessment
- Support zoning / regionalization / compartmentalization strategies
- Support to decision-making process
Inputs and output of a AHIS

- Vaccination data
- Laboratory results
- Geographic features
- Animal movement records
- Susceptible animal population
- Cases/outbreaks
- Other data
- Pathogens Genomic data

Animal Health Information System

- Notification to international organization
- Evaluation of veterinary actions
- Assessment of animal population health status
- Risk assessment
- Early warning
Key points for AHIS development

AHIS must be based on **clear rules and procedures**, specifying the responsibilities and tasks of all “actors”

- Data should be **validated** by those who have produced them
- Respect of the **organizational structure**, the legal competencies and tasks of the institutions involved
- Integration of different data sources requires data and **procedures standardization** and the implementation of **common dictionaries** and **common coding systems**
Example of integration of I&R and LIMS

1. SAMPLING
   - Animal samples
   - Food samples

2. SAMPLING DATA
   - Samples form with a unique sampling code

3. LABORATORY
   - Results of laboratory tests

4. TEST RESULTS
Example of integration of I&R and LIMS

1. SAMPLES REGISTRATION

Sampling data are automatically retrieved

2. SAMPLES TESTING

Test results

3. DIGITAL SIGNATURE

Example of integration of I&R and LIMS

- Sampling code
- Samples labelling
- Scanner
An example of LIMS integration in African countries

- LIMS web application called “SILAB for Africa” (SILABFA)
- Interoperability with I&R already in place in Botswana and ongoing in Namibia

SILABFA installed:
- Namibia
- Botswana
- Zambia
- Zimbabwe
- Tanzania

SILABFA requested:
- Ethiopia (AU-PANVAC)
- Uganda,
- Tunisia
Example of integration with I&R for diseases management: Web GIS
Example of integration with AT for diseases management: SNA & tracing tools
Example of integration with AT for diseases management: SNA & tracing tools
In-field applications

- Smartphones
- Tablets
Acknowledge
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